

REMARKS/ARGUMENTS

Claims 1, 3 and 4 are pending. By this Amendment, claim 2 is cancelled and claims 1, 3 and 4 are amended. Support for the amendments to claims 1, 3 and 4 can be found, for example, in the instant specification at page 9, lines 21 to 26, and in original claims 1-4. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

Objection to the Claims

The Office Action objects to claim 4 as an improper multiple dependent claim. Applicants submit that the amendments set forth herein obviate the objection. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

Rejections Under 35 U.S.C. §102

A. Boessler

The Office Action rejects claims 1 and 4 under 35 U.S.C. §102(b) over U.S. Patent No. 4,199,486 to Boessler et al. ("Boessler"). Applicants respectfully traverse the rejection.

Claim 1 recites "[a] resin composition for a molding material, comprising: 100 parts by weight of an acrylic polymer having a weight average molecular weight of between 200,000 and 5,000,000; and 10 to 100 parts by weight of a plasticizer per 100 parts by weight of the acrylic polymer; wherein: the acrylic polymer consists of primary particles which have a core-shell structure comprising a core polymer and a shell polymer; the core polymer and shell polymer comprise methyl methacrylate monomer units; and the core polymer has a lower content of methyl methacrylate monomer units than the shell polymer" (emphasis added). Boessler does not disclose or suggest such a resin composition.

As indicated above, the resin composition of claim 1 requires 10 to 100 parts by weight of a plasticizer per 100 parts by weight of the acrylic polymer. Boessler discloses a ratio by weight of polymer to plasticizer of between 10:3 and 1:10 and preferably between 2:3 and 1:2. See Boessler, column 5, lines 24 to 26. The ratios of Boessler can be converted 30 to 1,000 parts by weight of plasticizer per 100 parts by weight of polymer and preferably 150 to 200 parts by weight of plasticizer per 100 parts by weight of polymer. The Federal Circuit has held that a prior art reference disclosing a broad range will not anticipate a narrower range unless the prior art reference also describes the narrower range with specificity. See, e.g., *Atofina v. Great Lakes Chemical Corp.*, 78 U.S.P.Q.2d 1417, 1423-24 (Fed. Cir. 2006) (stating that prior art disclosure of temperature range of 100 to 500 °C does not anticipate claimed range of 330 to 450 °C because considerable difference between ranges would not permit conclusion that prior art describes claimed range with sufficient specificity to anticipate).

In this case, Boessler provides no specific disclosure of the narrower range recited in claim 1. While Boessler's general disclosure of the range of 30 to 1,000 parts by weight of plasticizer per 100 parts by weight of polymer encompasses the range recited in claim 1, all of Boessler's specific teachings relate to ranges and values that are outside of the range recited in claim 1. For example, Boessler's preferred range of 150 to 200 parts by weight of plasticizer per 100 parts by weight of polymer is outside of the range recited in claim 1. See Boessler, column 5, lines 24 to 26. Also, each of the Examples of Boessler includes 150 or 175 parts by weight of plasticizer per 100 parts by weight of polymer, which is outside of the range recited in claim 1. See Boessler, column 9, line 29 to column 10, line 26. Boessler provides no specific disclosure of a resin composition including 10 to 100 parts by weight of a plasticizer per 100 parts by weight of the acrylic polymer.

In addition, Applicants note that Boessler does not indicate that the polymer employed in the disclosed composition should have any particular molecular weight. Claim 1, by contrast requires, an acrylic polymer having a weight average molecular weight of between 200,000 and 5,000,000. Boessler does not disclose or suggest employing the particular polymer recited in claim 1 in a resin composition.

As discussed in the present specification, if a plasticizer is used in a resin composition in an amount that greatly exceeds the amount of polymer, the viscosity of the resulting resin composition becomes too low. *See* present specification, page 9, lines 24 to 26. By contrast, if a plasticizer is used in a resin composition in an amount that is significantly less than the amount of polymer, the moldability of the resulting resin composition deteriorates. *See* present specification, page 9, lines 24 to 26. Also, as discussed in the present specification, if a polymer having a weight average molecular weight of less than 200,000 is employed, physical properties, such as tear strength, of a molded article obtained by molding of the resin composition tend to deteriorate. *See* present specification, page 5, lines 19 to 22. On the other hand, if a polymer having a weight average molecular weight more than 5,000,000 is employed, the molding processability of the resin composition tends to deteriorate. *See* present specification, page 5, lines 22 to 23. By employing a polymer having a weight average molecular weight as recited in claim 1, post-molding shrinkage is small, providing good dimensional stability. *See* present specification, page 5, lines 26 to 27. Boessler fails to disclose or suggest employing an acrylic polymer having a weight average molecular weight as recited in claim 1 or employing a polymer/plasticizer weight ratio as recited in claim 1, or the benefits stemming therefrom. The only motivation to employ the particular polymer and polymer/plasticizer weight ratio recited in claim 1 is found in the present specification.

As Boessler fails to disclose or suggest a resin composition including an acrylic polymer having a weight average molecular weight of between 200,000 and 5,000,000 or

including 10 to 100 parts by weight of a plasticizer per 100 parts by weight of the acrylic polymer, Boessler fails to disclose or suggest each and every feature of claim 1.

As explained, claim 1 is not anticipated by Boessler. Claim 4 depends from claim 1 and, thus, also is not anticipated by Boessler. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Kasai

The Office Action rejects claims 1 and 3 under 35 U.S.C. §102(b) over U.S. Patent Application Publication No. 2001/0016612 A1 to Kasai ("Kasai"). Applicants respectfully traverse the rejection.

Claim 1 is set forth above. Kasai does not disclose or suggest such a resin composition.

Kasai does not disclose that any particular range of ratios of polymer weight to plasticizer weight should be employed. In the examples of Kasai, plasticizer is employed in an amount of 140 parts by weight of plasticizer per 100 parts by weight of polymer, which is outside of the range recited in claim 1. See Kasai, TABLE 2. Kasai provides no specific disclosure of a resin composition including 10 to 100 parts by weight of a plasticizer per 100 parts by weight of the acrylic polymer. In addition, Kasai does not indicate that the polymer employed in the disclosed composition should have any particular molecular weight. Accordingly, for at least the reasons discussed above with respect to Boessler, Kasai fails to disclose or suggest the polymer/plasticizer weight ratio or the polymer weight average molecular weight recited in claim 1.

As Kasai fails to disclose or suggest a resin composition including an acrylic polymer having a weight average molecular weight of between 200,000 and 5,000,000 or including 10

to 100 parts by weight of a plasticizer per 100 parts by weight of the acrylic polymer, Kasai fails to disclose or suggest each and every feature of claim 1.

As explained, claim 1 is not anticipated by Kasai. Claim 3 depends from claim 1 and, thus, also is not anticipated by Kasai. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

C. Ikegami

The Office Action rejects claims 1-4 under 35 U.S.C. §102(b) over JP 7-233299 to Ikegami et al. ("Ikegami"). By this Amendment, claim 2 is cancelled, rendering the rejection moot as to that claim. As to the remaining claims, Applicants respectfully traverse the rejection.

Claim 1 is set forth above. Ikegami does not disclose or suggest such a resin composition.

Ikegami discloses a ratio by weight of polymer to plasticizer of from 50 to 500 parts by weight of plasticizer per 100 parts by weight of polymer. See Ikegami, paragraph [0020]. However, Ikegami provides no specific disclosure of the narrower range recited in claim 1. While Ikegami's general disclosure of the range of 50 to 500 parts by weight of plasticizer per 100 parts by weight of polymer encompasses the range recited in claim 1, all of Ikegami's specific teachings relate to values that are outside of the range recited in claim 1. In particular, each of the Examples of Ikegami includes 150 parts by weight of plasticizer per 100 parts by weight of polymer, which is outside of the range recited in claim 1. See Ikegami, paragraph [0027]. Accordingly, for at least the reasons discussed above with respect to Boessler, Ikegami fails to disclose or suggest the polymer/plasticizer weight ratio or the polymer weight average molecular weight recited in claim 1.

As Ikegami fails to disclose or suggest a resin composition including 10 to 100 parts by weight of a plasticizer per 100 parts by weight of the acrylic polymer, Ikegami fails to disclose or suggest each and every feature of claim 1.

As explained, claim 1 is not anticipated by Ikegami. Claims 3 and 4 depend from claim 1 and, thus, also are not anticipated by Ikegami. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

For the foregoing reasons, Applicants submit that claims 1, 3 and 4 are in condition for allowance. Prompt reconsideration and allowance are respectfully requested.

Respectfully submitted,

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